



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,541	03/02/2000	Kia Silverbrook	AUTH15US	4978

7590 02/11/2005

Kia Silverbrook  
Silverbrook Research Pty Ltd  
393 Darling Street  
Balmain, 2041  
AUSTRALIA

EXAMINER
----------

NGUYEN, NGA B

ART UNIT	PAPER NUMBER
----------	--------------

3628

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/517,541

**Applicant(s)**

SILVERBROOK ET AL.

**Examiner**

Nga B. Nguyen

**Art Unit**

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is the answer to the communication filed on September 22, 2004, which paper has been placed of record in the file.
2. Claims 1-8 are pending in this application.

### ***Response to Arguments/Amendment***

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of new grounds of rejection.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park, U.S. Patent No. 5,673,223.

Regarding to claim 1, Park discloses in an authentication chip in which secret data is manipulated, a method of shielding manipulations of the secret data from observation, including the steps of: operating non-flashing CMOS structures in the chip (columns 1-2 and column 4, lines 17-55).

Park does not disclose pMOS and nMOS transistors are driven such that they do not have intermediate resistance simultaneously during a change of state of the CMOS

Art Unit: 3628

structure, to manipulate the secret data and operating conventional CMOS inverters adjacent the non-flashing CMOS structures at the same time. However, designing pMOS and nMOS transistors are driven such that they do not have intermediate resistance simultaneously during a change of state of the CMOS structure, to manipulate the secret data and operating the conventional CMOS inverters adjacent the non-flashing CMOS structures at the same time, are well known in the art and are choices of designing and operating CMOS structures in the semiconductor. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Park's to incorporate the designed choices above for the purpose of improving the security in operation of an authentication chip in which secret data is manipulated

Regarding to claims 2-3, Park does not disclose generating continuous circuit noise to a tamper detection line and driving the conventional CMOS structures from the tamper detection line. However, generating continuous circuit noise to a tamper detection line and driving the conventional CMOS structures from the tamper detection line is well known in the art of semiconductor. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Park's to include the feature above for the purpose of generating continuous circuit noise in the conventional CMOS structures.

Regarding to claim 4, Park does not disclose driving the conventional CMOS multiple times faster than non-flashing CMOS. However, it is well known in the art to drive the conventional CMOS multiple times faster than non-flashing CMOS. This is a

Art Unit: 3628

desired choice. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Park's to include the feature above for the desired purpose.

Regarding to claims 5-8, Park discloses an authentication chip (figures 2-3) for performing the method as discussed in claims 1-4 above, therefore are rejected by the same rationale.

### ***Conclusion***

6. Claims 1-8 are rejected.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Nga B. Nguyen whose telephone number is (703) 306-2901. The examiner can normally be reached on Monday-Thursday from 9:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on (703) 308-0505.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-1113.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

C/o Technology Center 3600

Washington, DC 20231

Application/Control Number: 09/517,541

Page 5

Art Unit: 3628

Or faxed to:

(703) 872-9326 (for formal communication intended for entry),

or

(703) 308-3691 (for informal or draft communication, please label

"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, Seventh Floor (Receptionist).

Nga B. Nguyen

A handwritten signature in cursive script that reads "Nga B. Nguyen".

January 6, 2005